

Commonwealth of Virginia

Enterprise Information Architecture

Version 1.0

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Commonwealth of Virginia Chief Information Officer
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Reviews

- This publication was reviewed and approved by the Director of the Policy, Practice and Architecture Division.
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Publication Version Control

Questions related to this publication should be directed to the Director of VITA's Policy, Practice, and Architecture (PPA) Division. PPA notifies Agency Information Technology Resources (AITRs) at all state agencies, institutions and other interested parties of proposed revisions to this document.

This following table contains a history of revisions to this publication.

Version	Date	Revision Description
1.0	06-07-2010	Initial EIA Report

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Executive Summary

Government and government services are normally information driven. Government organizations constantly and dynamically gather and process data to create information needed to support their missions, whether it is disaster recovery, environmental protection, citizen security, or other direct services. The Enterprise Information Architecture (EIA) provides the framework/model and methodology that will enhance each agency's ability to quickly discover, access, and understand data and create the information needed to make critical decisions and support agency business functions.

In its simplest terms, the EIA framework has three components as shown in Figure 1 that will contain information about the Commonwealth's data assets that can be used to answer questions such as:

- What data is available?
- Who has the data and who owns it?
- Is the data in a format that I can use?
- Is the quality and reliability of the data good enough to meet my needs?
- Can I get access to that data?

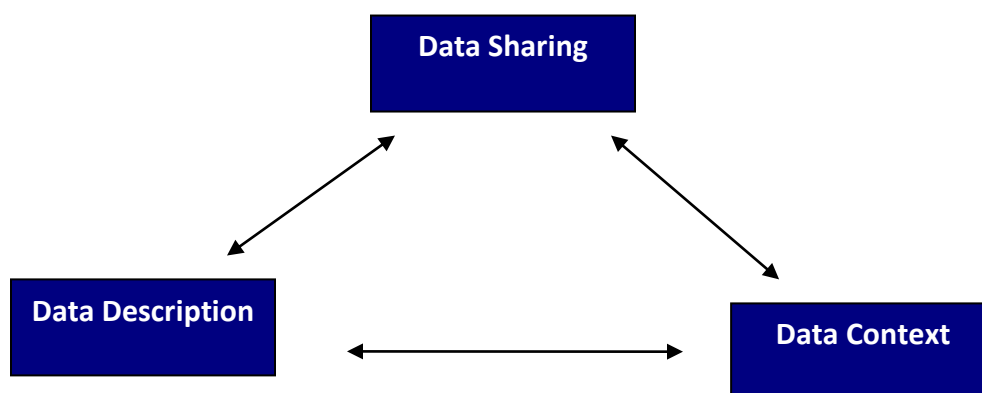


Figure 1 - Enterprise Information Architecture Concepts

- Data Sharing:** Supports the access and exchange of data where access consists of ad-hoc requests (such as a query of a data asset) and the exchange of fixed, re-occurring transactions between parties.
- Data Description:** Provides a means to uniformly describe data, thereby supporting its discovery, sharing and standardization.
- Data Context:** Facilitates discovery of data through the categorization of data. Additionally, it facilitates the identification of authoritative data sources for a business process.

The EIA is designed to provide a common framework for the cost effective sharing of government information across organizational lines while respecting the security, privacy and appropriate use of that information. It must enable agency leaders to manage information as a Commonwealth asset to better serve the citizens of Virginia. It increases the Commonwealth's agility in drawing out the value of information as a strategic mission asset.

To gain a fuller understanding of the EIA, it must be looked at within the context of the Commonwealth's Enterprise Architecture. Enterprise Architecture provides the strategic tools to manage the information needs of the business and the complexity of the information environment to meet those needs.

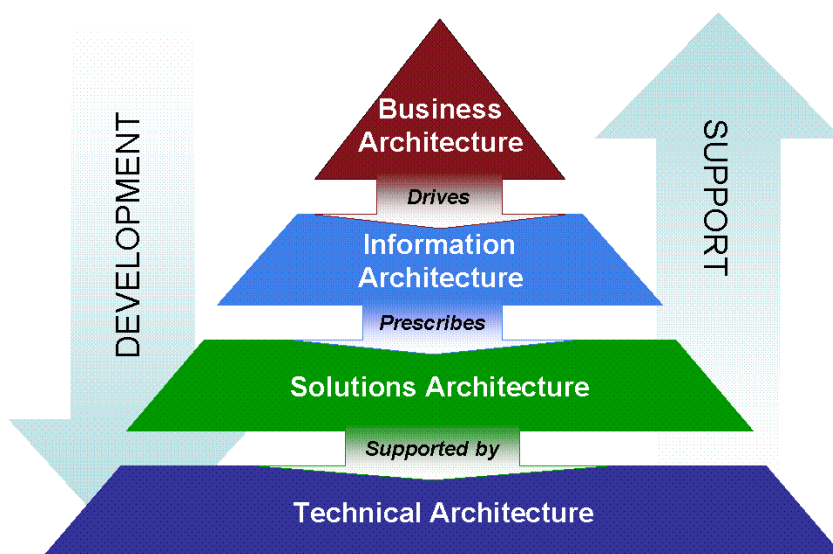


Figure 2 - Commonwealth of Virginia Enterprise Architecture Model

These interrelated Architectures provide mechanisms to identify, analyze and, where appropriate, facilitate opportunities for sharing, collaboration and strengthening cost efficiencies.

This document defines the EIA framework, data strategy, data standardization process and corresponding implementation requirements. It also provides a comprehensive overview of important topics on how the EIA relates to the overall COV Enterprise Architecture. It presents architecture direction and requirements for agencies that are planning or making changes or additions to their information technology. Within the scope of this document, "state agency" or "agency" is defined as any agency, institution, board, bureau, commission, council, or instrumentality of state government in the executive branch listed in the *Appropriation Act*. EA requirements/standards identified in this report are applicable to all agencies including the administrative functions (does not include instructional or research functions) of institutions of higher education, unless exempted by language contained in a specific requirement/standard.

Requirements are statements that provide mandatory Enterprise Architecture direction and follow the format of **EIA-R-nn**. Requirements introduced in this report are incorporated into the COV ITRM Enterprise Architecture Standard which can be viewed here:
<http://www.vita.virginia.gov/library/default.aspx?id=537>.

Glossary

As appropriate, terms and definitions used in this document can be found in the COV ITRM IT Glossary. The COV ITRM IT Glossary may be referenced on the ITRM Policies, Standards and Guidelines web page at <http://www.vita.virginia.gov/library/default.aspx?id=537>.

Introduction

Government and government services are normally information driven. Government organizations constantly and dynamically gather and process data to create information needed to support their missions, whether it is disaster recovery, environmental protection, citizen security, or other direct services. The Enterprise Information Architecture (EIA) provides the framework/model and methodology that will enhance each agency's ability to quickly discover, access, and understand data and create the information needed to make critical decisions and support agency business functions.

Data and information management is multi-dimensional and a key component of the EIA framework. It is critical to the functioning of an information-intensive knowledge based government, yet represents one of government's toughest business challenges. While some government data need to be exposed to the public and made discoverable, other data have to be controlled and protected. Getting the right information to the right people at the right time is at the heart of the EIA.

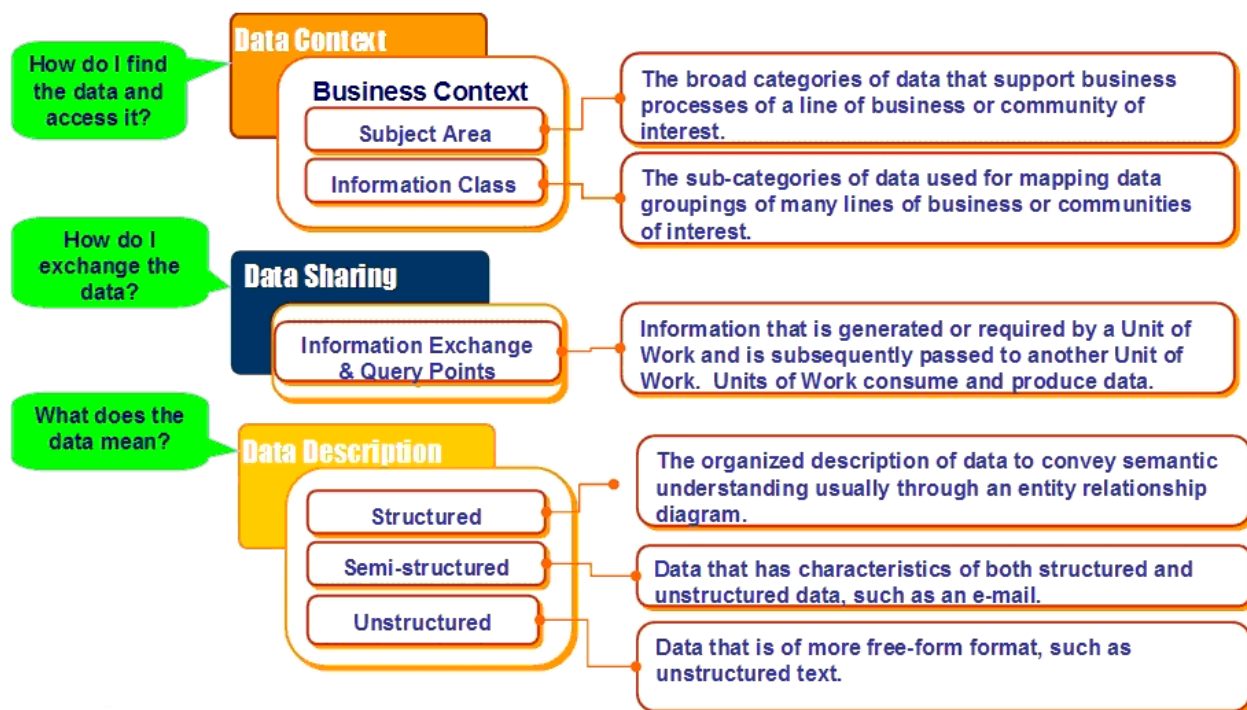
What makes data management challenging is that the data are either hidden in the processes that produce them or are not available in a commonly understood form. Agencies that have a need for data, but lack awareness that it already exists, can end up spending additional time and scarce resources to recreate the same or similar data to support their individual missions. The lack of data visibility and accessibility results in costly redundancy of data within and among government agencies.

The EIA enables the Commonwealth to begin to address the following key questions: How do agencies...

- discover data available for sharing and re-use?
- decide what data can be shared internally and externally?
- make data available, visible and accessible for sharing and re-use?
- ensure procedures for security, privacy, quality and appropriate use of data shared are considered and followed?
- minimize unnecessary redundancies in the collection and storage of data?
- drive down IT system costs through effectively managing their data?
- improve consistent access to and dissemination of government information to promote a more citizen-centered government?

EIA – Framework

In its simplest terms, the EIA framework has three components that will contain information about the Commonwealth's data assets.



Based on FEA DRM Version 1.0 and 2.0

Figure 3 - Enterprise Information Architecture Components

This framework provides three ways of thinking about the Commonwealth's data. It helps facilitate an agency's understanding of what data is available (whether "owned" by the agency or not), what does the data mean and how it can be shared or accessed; all this supporting the goal of having the right data at the right time to meet the business needs of the Commonwealth.

Data Context: What is the data that I need for my mission and how do I find it?

Data Context facilitates the ordered categorization of data in a business/mission context to help an agency understand what data (no matter its format - text, maps, data in analytical systems) is needed to support a particular line of business or mission. This is accomplished by ensuring all data assets are categorized by subject area and information class when they are inventoried. Data categorization will also help in the identification of duplicative data resources, discovery of data for reuse and enhancement of search capabilities.

Data Sharing: How do I exchange data?

Data Sharing is the process that provides the data from an information source to an information consumer in order to meet a business requirement. Advances in technology

such as XML and web services create the opportunity for the sharing of data across organizations thereby advancing the ability of agencies to achieve their core mission objectives.

The EIA is a catalyst for streamlining information sharing mechanisms and avoiding stove pipe approaches. It should create cost savings for federal, state, local and private industry partners, especially those who deal with multiple state agencies.

Data Description: How do I understand what the data means?

Data Description improves and facilitates the understanding of data, both in terms of finding it and processing it, once it is obtained. It is the reference point to identify COV approved data standards and to identify when standards need to be put in place to serve a cross agency mission need. It is not enough to be able to find and access data; the data must also be of trusted quality.

The EIA is an enterprise wide data strategy designed to address a very real challenge: how to make the most efficient use of our investment in data. If one agency already collects the data and it can be appropriately reused, why place an additional reporting burden on the regulated community or other government entities? The EIA provides the guidance to strategically support a department or agency in understanding the data it has, within the context of the Commonwealth's entire data holdings, so it can be deployed cost effectively and with appropriate usage.

The EIA facilitates data interoperability, harmonization and, to some extent, standardization across Commonwealth agencies in response to identified business and mission needs.

As enumerated below, the EIA supports government leaders in fulfilling their responsibilities under existing policy, law, and strategic plan objectives.

- Maximize the practical utility of and public benefit from information collected by or for the Commonwealth and reduce collection burdens on the public.
- Seek to satisfy new information needs through interagency or intergovernmental sharing of information, or through commercial sources where appropriate, before creating or collecting new information.
- Implement processes to organize and categorize government information.
- Identify how information and data are created, maintained, accessed and used.
- Adopt a basic standard of data quality (including objectivity, utility and integrity) as a performance goal and incorporate information quality criteria into agency dissemination practices.

EIA – Data Strategy

The Commonwealth needs to streamline government, improve services while reducing costs, and provide greater transparency, while safeguarding privacy. These needs require fast access to accurate data – data which supplies real and actionable business information. Government business cannot be separated from data and information management.

A data strategy has been developed to help achieve these aims. The data strategy vision for the Commonwealth views “enterprise data and information managed as a Commonwealth asset to provide value to citizens and stakeholders.” The strategy describes business drivers, principles, and vision – and outlines goals, objectives, and strategies needed to achieve this vision. The Commonwealth Data Strategy document can be found on the EA Data Management website here:

<http://www.vita.virginia.gov/oversight/default.aspx?id=10338>. A brief overview of that strategy is presented here.

Commonwealth leadership recognizes that business relies on access to, and analysis of, meaningful data. The strategy encourages leadership to support the evolution of the data management discipline - not only to meet agency needs - but to support and reap the benefits of sharing data across the Commonwealth.

IT innovation has made it easier to search and exchange information, and can give better understanding of business needs, better service delivery, and clearer documentation of results. Understanding and leveraging the options offered by IT advancements to provide actionable business information can also support more open/transparent government for Virginia’s citizens and provide more public-facing services.

The challenge lies, not in a lack of technological enablers, but in finding the organizational will to create a shared business vision and path that shows how to deploy the right tools at the right time and place.

The Vision: *Enterprise data and information is managed as a Commonwealth asset to provide value to citizens and stakeholders*

Enterprise data is defined as data that is collected by two or more state agencies or shared between state or other entities (local government, federal government and other states).

The Data Strategy vision points toward a future of unlocking the potential of Commonwealth data assets. The following goals support this vision.

Goal 1: Implement an enterprise data management program

Data management will provide a common framework for the cost effective sharing of government information across organizational lines while respecting security, privacy and the appropriate use of information.

Goal 2: Enable enterprise data sharing

Create structures that support collaboration among stakeholders, and facilitate “the responsibility to provide” culture across the Commonwealth, for the sharing of data, information, knowledge and expertise.

Goal 3: Establish data governance and oversight

Business and IT leaders must provide governance and oversight to ensure that the direction set and decisions made in carrying out the data strategy remain in line with the Commonwealth’s business strategy.

These goals are the building blocks of a solid foundation for leveraging of Commonwealth data assets. The continued commitment and participation of Commonwealth agency stakeholders in advancing this vision is necessary to keep this model responsive to Commonwealth agencies and the citizens, businesses, and governmental organizations they serve.

EIA – Data Management Program

Currently, individual agencies collect and create data to support the specific business processes that they're responsible for executing. Agencies are often criticized for locking up data in unconnected stovepipe legacy systems. The EIA requires that they view the data as an asset of the Commonwealth. The EIA supports the emergence of repeatable processes that enable agencies to discover, share and seamlessly exchange data and information relevant to meet business objectives.

Agency heads, IT leaders, Chief Information Officers (CIOs) and Agency Information Technology Resources (AITRs) are in a unique position to ensure that information required for a strategic goal or business objective is quickly and easily located, accessed and understood by those who need it. To achieve superior performance results, they must manage the strategic, tactical and operational data and information needs of their agencies in a way that contributes to the needs of the Commonwealth as a whole.

Enterprise data management consists of the planning, execution and oversight of policies, practices and projects that acquire, control, protect, deliver and enhance the value of data and information assets. The Data Management Association's (DAMA) data management functions and corresponding definitions are being used as the functional framework for the Commonwealth's data management program. The mission of the data management program is to meet and exceed the information needs of all the stakeholders in terms of information availability, security and quality.

Enterprise data management multiplies the value of existing "siloes" data holdings through integration and better understanding of what data means, how to access it and how to employ it in support of strategic goals. Successful implementation of enterprise data management will lead to fewer incompatible data stores and a future where data will deliver better information to those who need it, at less cost.

In order to mature the discipline of data management, the Commonwealth must develop a data management program plan which defines the strategic goals, principles and functions to be achieved in the short and long term. This plan will be based upon guidance provided by DAMA's Data Management Book of Knowledge (DM-BoK). The implementation of a Data Management Program will ultimately improve the ability of the Commonwealth to cost effectively collect and deliver the right data to the right person at the right time.

Strategic goals for a Data Management Program may include:

- Understanding the information needs of the enterprise and all its stakeholders.
- Capturing, storing, protecting and ensuring the integrity of enterprise data assets.
- Continually improving the quality of enterprise data and information.
- Ensuring privacy and confidentiality and to prevent unauthorized or inappropriate use of enterprise data and information.
- Maximizing the effective use and value of enterprise data and information assets.
- Removing barriers for data sharing so that it is possible to respond timely to state or national situations.

EIA – Data Standardization Process

Data management is highly decentralized in the Commonwealth, yet there are considerable amounts of commonly used data that if standardized, could increase data sharing and interoperability between systems and governmental programs. In order to implement data standards, the Commonwealth needs a defined process for how to standardize data.

EIA-R-01 Data Standardization Process –VITA shall develop and maintain a defined process for how to standardize enterprise data.

The Data Standardization Process documents how agencies will collaborate to define and adopt data standards for use in the Commonwealth. This process puts forth a repeatable approach which facilitates the requirement for the Commonwealth to rapidly implement information sharing and reuse of data in response to business needs. It also defines the key roles and responsibilities for Commonwealth resources as they pertain to the development and maintenance of data standards. The Data Standardization Process is one of several supporting processes to be developed within the Data Architecture function. Data Architecture is one of the ten functions DAMA identifies as part of the data management discipline.

Data ownership and oversight is a key role in the data standardization process that allows a designated Data Standard Owner(s) (DSO) to exercise authority and control (planning, monitoring and enforcement) over the management of data standards. This helps ensure that data under the control of data owners is accurate, appropriately shared and protected. The DSO and their data stewards provide the business/functional expertise to develop and manage a data standard. The Commonwealth is using the DAMA governance model as a guide for establishing data governance and oversight roles.

A DSO is a collaborative group of business users who develop a common vocabulary to exchange information in pursuit of common goals, interests, missions or business processes. A DSO may include any number of members from government or non-governmental organizations. A DSO may also include cross-functional members representing data consumers, data producers, program managers, and data sharing governance groups. A DSO is tasked with resolving common issues affecting their communities. They actively participate in developing and maintaining data standards.

The Data Standardization Process is composed of six phases:

1. **Investigate artifacts** - Specific sources of information are gathered and examined for the purpose of determining information needs, scoping information deficiencies, and planning information improvements.
2. **Identify and submit requirements** - Information engineering structure is applied to data design and provides an initial review of data that could be proposed as an enterprise data standard.
3. **Conduct formal cross-functional review** - A formal cross-functional review is conducted on the proposed data standard package.
4. **Resolve comments** – Resolve recommended changes and corrections received from stakeholders during the formal review of the proposed data standard package.

5. **Obtain approvals** – Proposed data standard package is reviewed and approved as a Commonwealth data standard.
6. **Implement standards** – The Commonwealth data standard is put into operation and appropriate communications are provided to the stakeholders about the implementation guidance/requirements of the data standard.

The Data Standardization Process component part of the EIA provides a means to improve communications and facilitate sharing of data artifacts and information between organizations. The detailed process can be found at <http://www.vita.virginia.gov/oversight/default.aspx?id=10342>.

EIA – How will it work?

Create the ability for rapid information sharing, data standardization, and data re-use.

Various mechanisms are used to store and process different types of information (metadata) about data. A data asset metadata repository and a data standards catalog are two mechanisms used to store information about data to enable discovery, support interoperability, and enhance data asset understanding. For additional information, view the EA Data Management website here:

<http://www.vita.virginia.gov/oversight/default.aspx?id=10338>.

It is important to understand the use of each mechanism and the distinctions between them.

A **data asset metadata repository** is a system that contains information that describes at a high level the data assets that comprise the collective data assets of the Commonwealth. The Commonwealth Enterprise Technology Repository (CETR) provides the means to maintain an inventory of the Commonwealth's data assets. It can be accessed by authorized users here: <https://ssl01.apps.vita.virginia.gov/CETR/default.aspx>. Access may be requested by sending an email to ea@vita.virginia.gov.

EIA-R-02 Data Asset Repository Maintenance – Agencies shall maintain a current inventory of the data assets used by their application portfolio as part of the Commonwealth's Enterprise Technology Repository (CETR).

The repository is an application that stores the name and description of the data asset, owner, location, and technology of the data asset. It does not contain the actual data or information; rather, it simply stores the metadata or information about the data assets owned by in-scope executive branch agencies.

A **data standards catalog** contains the instances of metadata associated with individual data standards (i.e. procurement), entities (i.e. vendor or customer) associated with each individual data standard, and attributes (i.e. vendor name or vendor ID) associated with each individual entity. The catalog does not store the actual information but rather describes how attributes about an entity related to a specific data standard are to be collected, stored, and shared.

EIA-R-03 Data Standards Catalog – Approved Commonwealth data standards shall be posted to the COV Data Standards Catalog.

All COV enterprise and multi-agency data standards will be posted to the COV Data Standards Catalog within 10 working days after their approval. The COV Data Standards Catalog is available for viewing on the VITA website here:

<http://www.vita.virginia.gov/oversight/default.aspx?id=10344>

What is a Data Standard?

A data standard represents a set of requirements related to a specific subject area that define how associated data is to be collected, stored, and exchanged. At a minimum, a data

standard must include a narrative describing the implementation requirements and corresponding time lines for agencies. A data standard may also include artifacts such as data models, data dictionaries, and implementation specifications.

EIA-R-04 Data Standard Narrative – Approved Commonwealth data standards shall contain a data standard narrative that at a minimum defines the implementation requirements and corresponding time lines.

Over time, a data standard should come to represent all the data which is needed by any agency for a specific subject area. A data standard does not require that every agency carry all data defined as part of a data standard. Agencies need only maintain the data required to support their business needs. A data standard requires that if an agency maintains data described in the standard, that data should be compliant with the data standard.

Types of Data Standards

The Commonwealth Data Standards Catalog contains internal and external types of data standards.

Internal COV data standards are developed by business representatives with functional subject matter expertise. The Procurement Vendor data standard is an example of an internal COV data standard. It defines the data the Commonwealth manages about procurement vendors. Each internal data standard contains a data model, data dictionary reports generated from the data model and a corresponding narrative document. The narrative document describes the scope of the standard, requirements, compliance and policy implications.

External data standards are developed and maintained by national, federal or industry organizations with input from business experts. External standards will include varying levels of detail and may be farther reaching than typical COV developed internal data standards. For example, the National Information Exchange Model (NIEM) includes many data exchange standards in use by state and federal agencies working on global justice and homeland security systems. Another example are the data standards and formats for health information exchanges being developed and continually refined by the federal government and other industry experts in the Health IT field. Each external data standard contains a corresponding guidance document. The guidance or narrative document describes the scope of the standard, requirements, policy implications and implementation guidance.

Scope of Data Standards Catalog Content and Use

In the near term, the Commonwealth's priority will be to develop and/or adopt data standards for enterprise data.

Enterprise data is defined as data that is collected by two or more state agencies or shared between state or other entities (local government, federal government and other states).

Executive branch agencies are required to use the COV Data Standards Catalog as follows:

- EIA-R-05 Implementation** – Agencies shall comply with the implementation requirements of all approved Commonwealth data standards.
- EIA-R-06 Migration** – Agencies shall assess the impact of all approved COV data standards on their existing processes and applications and define migration strategies for implementation.
- EIA-R-07 New Projects and Major Enhancements** – Agencies shall review the Data Standards Catalog when developing plans for new applications or major enhancements to existing applications and document the potential impact of implementing existing data standards on the planned project.
- EIA-R-08 Develop New Standards** – Agencies shall work with VITA to develop internal enterprise data standards and/or identify external enterprise data standards for their domain of expertise (e.g. Finance, Licensing, etc.).

Implications:

Typically internal data standards will be developed or external standards introduced as part of new application development projects or enterprise data exchanges.

- EIA-R-09 RFP/RFI/IFB and Contract language** – All Request For Proposals (RFP), Requests For Information (RFI), Invitation For Bids (IFB), and contracts that concern IT software solutions shall contain text that requires any solution to be compliant to the COV Data Standards or have an approved Data Standard Exception.

Implications:

Boiler plate language to satisfy this requirement is available in templates provided by a VITA Supply Chain Management (SCM) sourcing specialist. Additional information about SCM and their services can be found here: <http://www.vita.virginia.gov/scm/>.

- EIA-R-10 Data Standards Catalog** – VITA shall maintain and manage the Data Standards Catalog.

The Commonwealth Data Standards Catalog is publically available and can be found on the VITA website at <http://www.vita.virginia.gov/oversight/default.aspx?id=10344>.

Data Standards Maintenance

Over time, data standards can become out of date and no longer accurately reflect the needs of the business. In order to ensure that data standards are current they must be reviewed on a periodic basis by the business owners. This is particularly important for the narrative that is required for each data standard. The narrative contains information about

implementation plans and compliance schedules. This type of information will need to be updated as needs change and plans progress.

EIA-R-11 Data Standard Review – Designated Data Standard Owners shall review Data Standards annually. An update to the Narrative for each Data Standard shall be made certifying that the Narrative and any accompanying models are accurate and current.

Implications:

The Data Standard Owners will follow the Data Standard change process below to update the Data Standard Catalog.

Key Processes For Developing and Maintaining Data Standards

The Commonwealth will use the following key processes to guide the development and maintenance of COV data standards.

Developing a New Data Standard

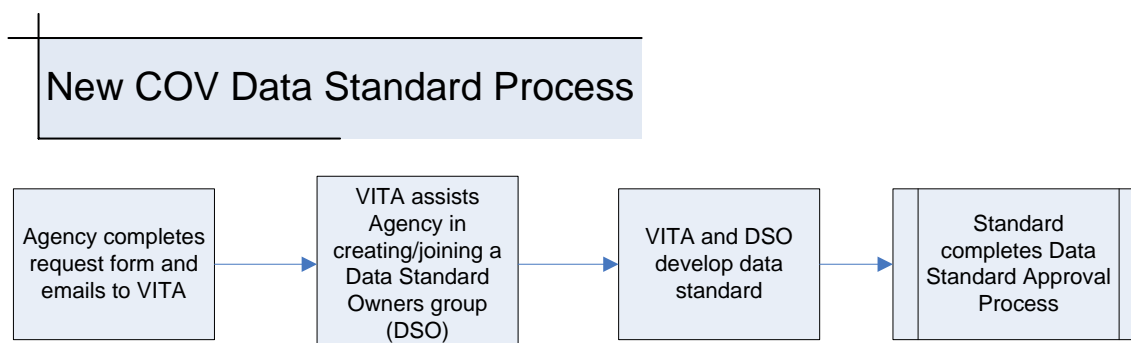
If it is determined that a new COV data standard is needed, the lead agency or organization should fill out the New/Changed Data Standard Request form and email it to ea@vita.virginia.gov. This form can be found here: <http://www.vita.virginia.gov/oversight/default.aspx?id=10344>.

VITA will identify a Data Standard Owners group (DSO) related to the request. VITA and the DSO will review the request, determine if the request is warranted and develop a work plan to accommodate needed activities.

For new internal COV data standards, VITA will help facilitate the data standards creation process by answering questions about the Data Standardization Process and providing data standard development expertise.

For new external COV data standards, VITA will help facilitate the external data standards review, answer questions about the Data Standardization Process, assist in developing exceptions to the external data standard and provide expertise related to developing implementation criteria.

Once a new proposed COV data standard (internal or external) has been developed and validated as complete by the DSO, it will follow the data standard approval process.



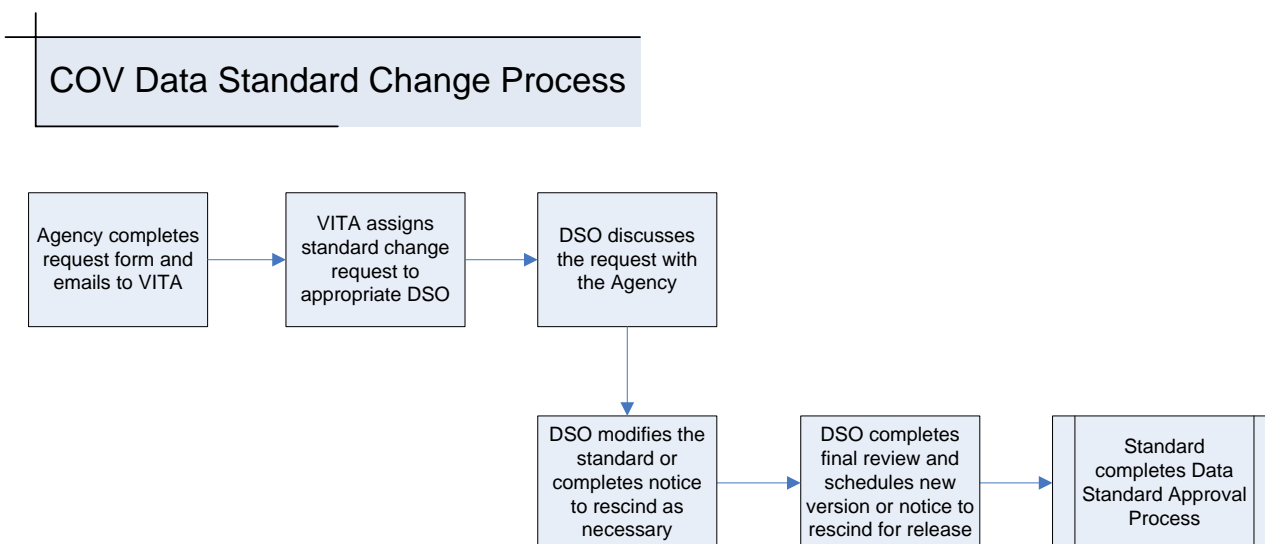
Changing an Existing Data Standard

If an agency or organization believes a change is needed to an existing COV data standard (internal or external) or an existing COV data standard is no longer appropriate, the agency or organization should complete the New/Changed Data Standard Request form and email it to ea@vita.virginia.gov.

VITA will assign the request to an appropriate Data Standard Owners group (DSO). VITA and the DSO will review the request, determine if the request is warranted and develop a work plan to accommodate needed activities.

VITA will help facilitate the detailed review of the data standard and as needed document any required changes, exceptions, or recommendations related to rescinding the data standard. VITA will also be available to answer questions about the Data Standardization Process and provide assistance in developing appropriate implementation criteria related to any recommended changes.

Once proposed changes to the COV data standard (internal or external) have been developed and validated as complete by the DSO, it will follow the data standard approval process.



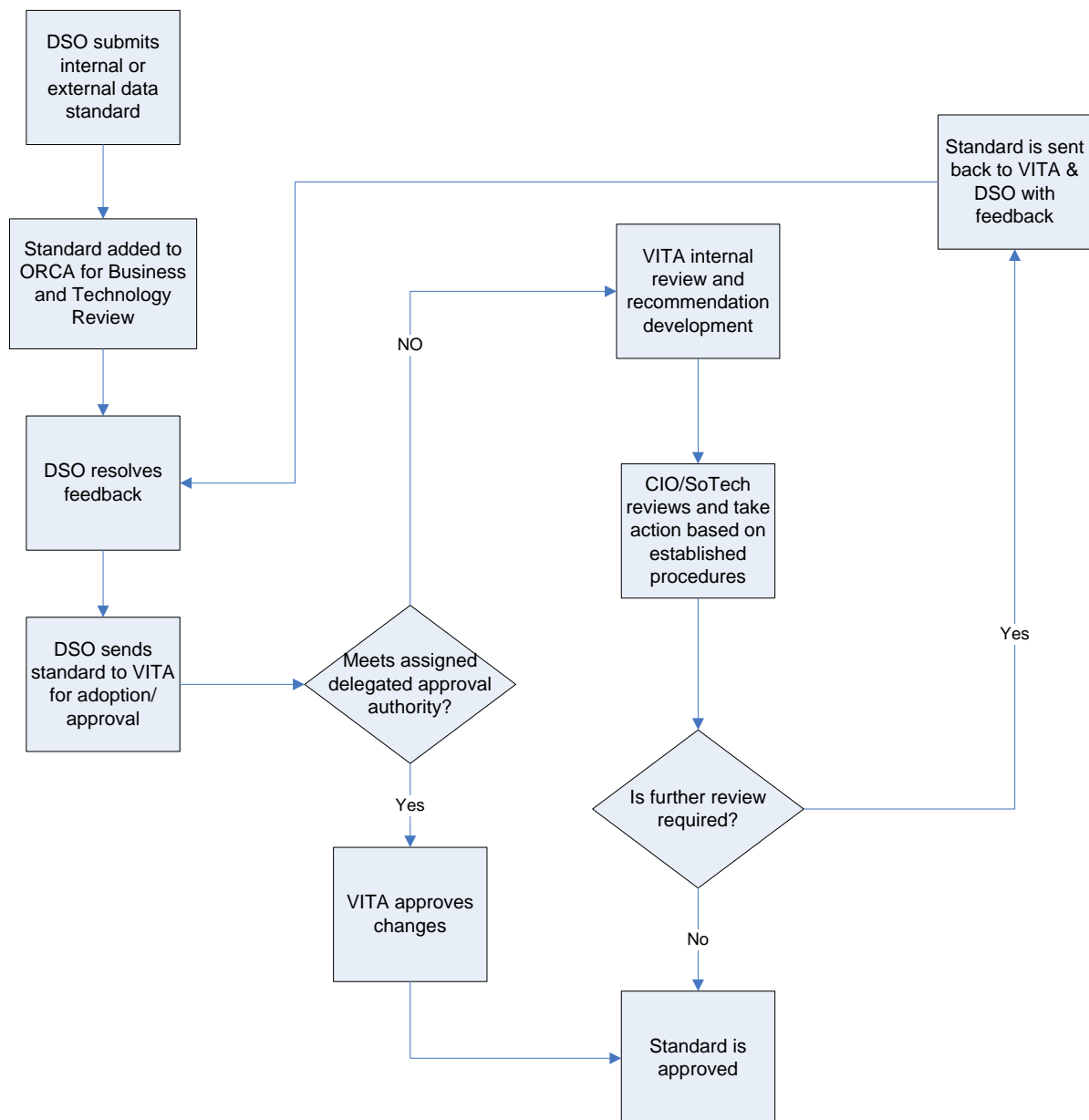
Data Standard Approval Process

Once the DSO has drafted proposed changes to an existing data standard or a new data standard and reviewed it with key stakeholders and VITA, the proposed data standard will be posted to the VITA Online Review and Comment Application (ORCA) for review and comments. After the review period ends and the comments and recommended changes have been addressed, the DSO sends the proposed data standard to VITA with their recommended action. The data standard is reviewed and if only a minor change is being proposed, it can be published to the COV Data Standards Catalog. Otherwise, if a new standard is being proposed, an existing data standard is being materially changed, or the proposed change is not within assigned delegated authority, the proposed standard with a

recommended action is presented to the CIO/Secretary of Technology for their review and action based on the Secretary of Technology's established procedures.

If the proposed COV data standard is approved, it will be published and distributed using the same procedures used for distributing IT related policies, standards, and guidelines. Any rejected proposed COV data standards will be returned to VITA and DSO for review and possible corrective action. The DSO will review the feedback and determine next steps for the data standard.

Data Standard Approval Process



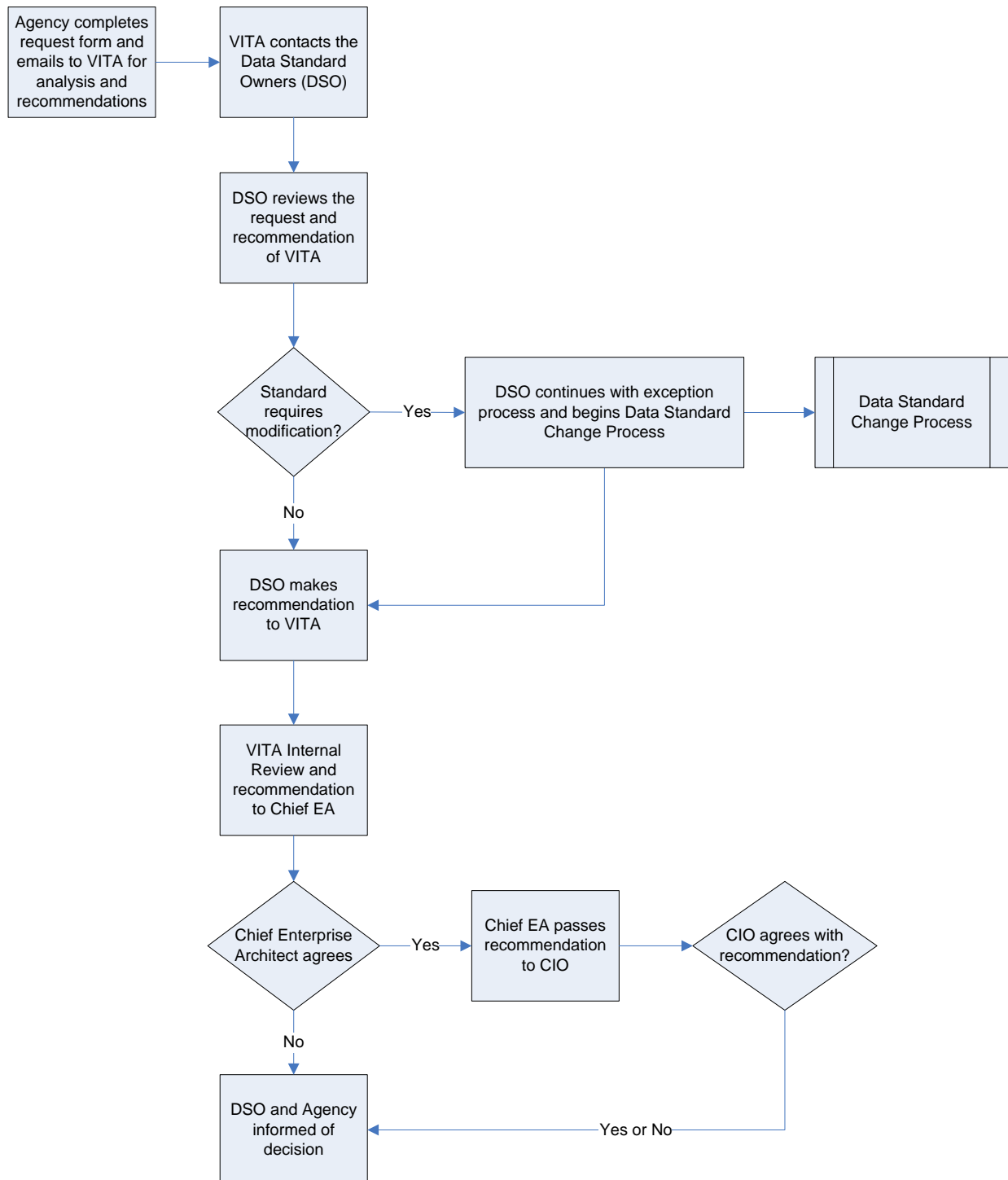
Request an Exception to an Existing Data Standard

If an agency believes it cannot comply with implementation requirements associated with an approved data standard, it should submit a Data Standard Exception request by completing the EA Change/Exception Request form and submit it to ea@vita.virginia.gov. This form can be found here: <http://www.vita.virginia.gov/library/default.aspx?id=537>.

VITA will facilitate the review and analysis of all received Data Standard Exception requests. Review and analysis includes evaluating the request for completeness, assessing the business case, analyzing the impact on the agency and the Commonwealth, and receiving subject matter expert's review and recommendations from the appropriate DSO. After the review and analysis has been completed, VITA will develop and present the request with appropriate recommended actions to the CIO for review and action.

CIO actions taken on an exception request will be provided to the requesting agency and to the DSO.

Data Standard Exception Process



The Future State

The Commonwealth of Virginia intends to mature its Enterprise Information Architecture by focusing on the following strategic goals and activities:

- Implement an enterprise data management program. The data management program will be developed using the ten functional areas defined by the Data Management Association DM-BoK. The first function to be developed, Data Architecture, will support interagency data exchange through the continued adoption of data standards. The remaining nine functions will be prioritized and developed over time. They included areas such as metadata management, data quality, reference and master data management, data security and data development.
- Enable data sharing by partnering with agencies to manage an inventory of data assets. The inventory will allow agencies to discover sharable information. Processes will be developed to enable the data asset metadata to be maintained in a timely and efficient manner.
- Establish data governance for enterprise data. Data governance is the exercise of authority and control over the management of data assets. This includes partnering with the business data owners and stewards to formalize data governance through planning and control activities.
 - Data management planning includes activities such as adopting a data strategy for the Commonwealth, establishing a data governance capability, sponsoring data management projects and developing corresponding policies, standards and procedures.
 - Data management control coordinates data governance activities, manages and resolves enterprise data related issues, oversees data management projects and ensures compliance with data policies, standards and architecture.

The Enterprise Information Architecture creates a framework to manage the data and information needed to support the business of the Commonwealth of Virginia. The Data Strategy, Data Management Program and Data Standardization Process provide the beginnings of what will ultimately be one of the leading government sponsored Information Architecture programs in the country.

EIA Context Diagram

The EIA Context Diagram shows the relationship of this document to the other EIA “pieces and parts” and their relationships to the overall Commonwealth EA program.

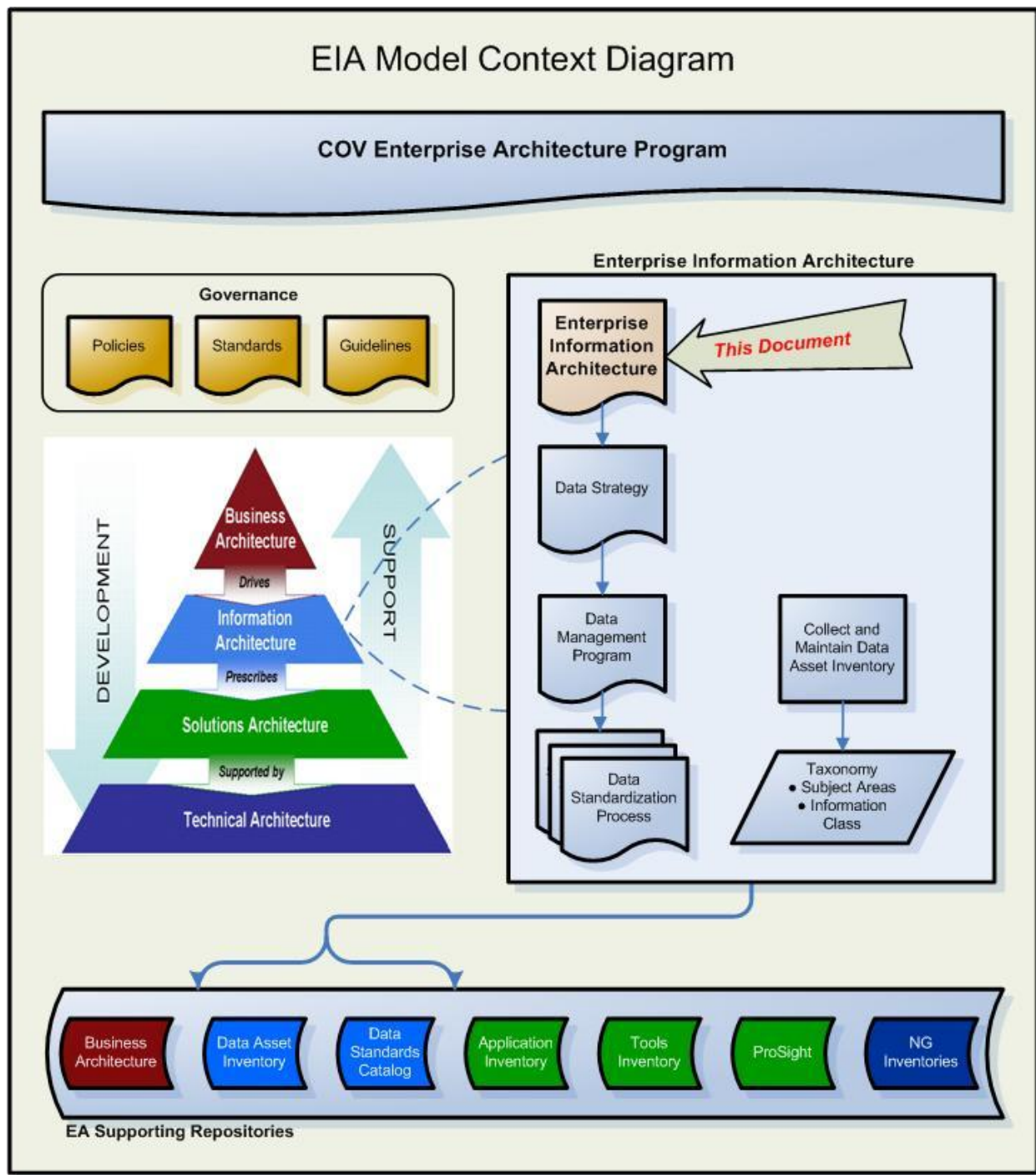


Figure 4 - EIA Context Diagram